

# Nuclear Facility Deactivation and Decommissioning (D&D), Remainder of Hanford (RL-0040)

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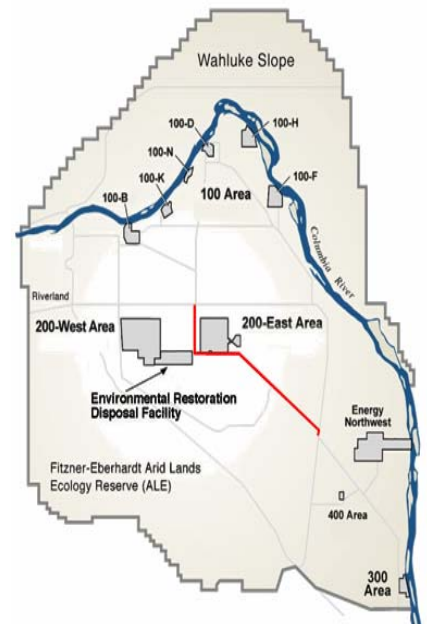
**212-N Facility  
Repackage and Retrieval**



**2715-W Demolition**



**Application of chip seal asphalt surface treatment on Route 4 South  
from the Wye Barricade to the 11A intersection scheduled to start the  
week of June 25, 2007, and finish July 4, 2007**



## Overview

This section addresses Project Baseline Summary (PBS) RL-0040, Nuclear Facility Deactivation and Decommissioning (D&D), Remainder of Hanford. There are three major components to this work scope:

- Central Plateau Deactivation & Decommissioning (R. E. Wilkinson),
- Waste Sites Remediation (B. H. Ford), and
- Reliability Projects (R. G. Slocum).

NOTE: Unless otherwise noted, all information contained herein is as of the end of April 2007.

## Notable Accomplishments

### PBS RL-0040, Nuclear Facility D&D, Remainder of Hanford

#### Central Plateau D&D:

##### 200-UW-1 U Plant Zone Waste Site Remediation:

- Comments have been received and the Record of Decision (ROD) has been revised. Revised ROD will be transmitted to Fluor Hanford, Inc. (FH), RL, the U.S. Environmental Protection Agency (EPA), and the Washington State Department of Ecology (Ecology) for review the week of May 21, 2007, with workshops to resolve outstanding issues scheduled for the first week of June.
- Remedial Action Goals (RAGs) document has been drafted and is being reviewed. Transmittal to the regulators is expected the first week of June.
- 241-U-361 sample analysis Letter of Instruction (LOI) drafted and reviewed.
- 241-U-361 job/site walkdowns with CH2M HILL sampling crew.

##### 200 North Sites – Remove, Treat and Dispose (RTD):

- Validated sites 2 and 3 characterization data.
- Waste profile approved.
- Started waste site 5 remediation.

##### 221-U Facility Canyon:

- Finalized the Cell 30 Vessel Contents Removal Study.
- Distributed the Canyon Grout and Void Fill Study for internal review.
- Finalized the Railroad Tunnel Reactivation Study.
- Developed a draft of the Canyon Waste Acceptance Study.

##### 212-N Facility:

- Repackaged and retrieved damaged crates #6 and #10. All crates from the building ground level have been retrieved. Nine of 15 crates have been retrieved.
- Non-destructive analysis (NDA) completed on five crates.
- Fabrication and delivery of shipping containers continue. All fifteen containers have been received.
- Contaminated Equipment Special Packaging Authorization (CE SPA) checklist for crates #4, 5, 7, 8, and 9 is pending RL approval.
- Began preparation for upper level mezzanine access and crate retrieval.

##### PUREX and Canyons:

- Began development of the Multi-Canyon Project Management Plan draft.
- Conducted PUREX Data Quality Objective (DQO) interviews with Ecology.
- Began drafting the PUREX DQO Summary Report.

## Notable Accomplishments, continued

### Waste Sites Remediation:

- Submitted the BC Crib Treatability Test DQO and Sampling Analysis Plan (SAP) to RL.
- Submitted path forward for burial grounds Work Plan to RL.

### Reliability Projects:

- Continued progress on current year reliability projects.
  - Submitted L-626, *100B Area Export Water System Reliability Enhancements*, NEPA categorical exclusion letter to RL for approval on April 13, 2007.
  - Completed L-615, *273E Renovations*, 90 percent design review on April 26, 2007.
  - Completed L-429, *Mortar Line a 12-inch Pipe from the Water Plant to PUREX*, definitive design on April 25, 2007.
  - Issued bid solicitation for the partial replacement and repair of roof membranes on 609, 609A, M0-406, and 3709A Buildings.

## FY 2007 Funds vs. Spend Forecast (\$M)

	Projected FY 2007 Funding	FY 2007 Fiscal Year Spend Forecast	Variance
RL-0040 Nuclear Facility D&D, Remainder of Hanford	\$ 69.5	\$ 64.1	\$ 5.5

## Schedule/Cost Performance (\$M)

Nuclear Facility D&D, Remainder of Hanford	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion (FY07/ CTD)
Current Period (Month)	\$4.9	\$4.2	\$4.3	-\$0.7	-14.5%	-\$0.1	-1.4%	\$60.5
Cumulative-to-Date (FY 2004-Present)	\$221.4	\$218.4	\$215.8	-\$3.1	-1.4%	\$2.6	1.2%	\$323.0

Numbers are rounded to the nearest \$0.1M.

### CTD Schedule Performance (-\$3.1M/-1.4%):

The unfavorable schedule variance (SV) for Central Plateau D&D Project (CP D&D) (+\$0.6M) is due to:

- Delay in ROD approval resulting in additional delays to field work (216-U-8 and 216-U-12 cribs) (-\$1.7M). Additional characterization work scope (deep vadose zone characterization and Treatability Test Plan) has been requested by the regulators. A baseline change request (BCR) has been transmitted to RL that adds this new scope and defers the barrier scope. Also due to delays in 200 North Waste Site remediation as a result of regulatory approvals (RAWP) taking longer than planned.
- Delays in Surveillance and Maintenance (-\$1.1M) for the B Plant and PUREX filter change outs and REDOX and U Plant fan replacements due to delays in receipt of materials and exhaust fans. It is expected that a portion of some surveillance and maintenance (S&M) activities will carry over into next fiscal year. Delays in procurement/installation of the portable decontamination and shower trailer (-\$0.3M). The trailer is expected to be received in June.
- Offset by accelerated completion of post contract period demolition projects in previous years (+\$3.7M).

## Schedule/Cost Performance (\$M), continued

### CTD Schedule Performance, continued:

The improving unfavorable SV in Waste Sites (-\$2.5M) is due to the following:

- Delays in engineering studies/miscellaneous (-\$0.5M). Impacts and recovery actions: No impacts; studies will be replanned to FY 2008.
- Delays in PW-2/4 and LW-1 (-\$0.3M) due to activities being placed on hold pending the M-15 TPA baseline revision. Impacts: None; approve and implement the M-15 BCR.
- Delays in the scheduled MW-1 (\$-0.9M) feasibility study activities due to competing priorities. Impacts: None; this will be resolved with the approval and implementation of the M-15 BCR.
- Delays in SW-2 collaborative DQO which is taking longer than planned due to a large number of regulatory participants, issues and concerns; resources focusing on DQO causing additional delays in other SW-2 scope (work plan, modeling, and data management and passive vapor sampling) (-\$0.6M). Impacts and recovery: based on assessments by the project lead, recovery of this schedule variance will be possible only with a baseline revision.
- Other miscellaneous delays (-\$0.2M). Impacts and recovery actions: None.

NOTE: Baseline activities for most operable units within RL-40 Waste Sites are being modified to address regulatory needs for supplemental characterization. In addition, the TPA change package for the M-15 milestones was approved by the respective parties on February 27, 2007, and a BCR is being developed to address this change package. This BCR was sent to RL on May 11, 2007. The contract-to-date schedule variances for Operable Units PW-2/4, LW-1, and MW-1 should be resolved with the approval and implementation of this BCR.

The unfavorable SV for Reliability Projects (-\$1.1M) is primarily due to the following factors:

- L-626, *100B Export Water System Reliability Enhancements*, is delayed due to pump procurement and environmental impact assessment complexities (-\$0.4M). A change in the project construction schedule logic will allow installation activities (removal of old pumps and the pre-installation activities for the new pumps) concurrent with assembly of pumps offsite.
- Numerous projects were delayed due to resource unavailability (i.e., L-614, *Repeater Sites Safety*, and update of Infrastructure Reliability Master Plan) (-\$0.4M). Projects have been initiated.
- L-515, *Chip Seal Route 4S from Wye Barricade to Route 11A*, rock crushing activities delayed to May/June to allow independent testing of crushed rock material (-\$0.2M) No impact. Workslope is scheduled to be completed in July 2007.
- Delay in procurement of regulated guzzler. Impacts: None. Guzzler is projected to be delivered in June 2007 (-\$0.1M)

### CTD Cost Performance (+\$2.6M/+1.2%):

The favorable cost variance (CV) for CP D&D (+\$4.2M) is primarily due to the following factors:

- Prior year cost overruns resulting from 1) additional direct pushes during field investigation to determine contamination levels, 2) greater than planned effort to resolve feasibility study/proposed plan comments and Remedial Design and SAP, 3) delays in barrier construction without reductions in staffing levels, 4) lateral spread of contamination resulting in more waste containers being shipped to Environmental Restoration Disposal Facility than planned, and 5) higher than planned sampling costs for 200 North RTD Waste Sites (-\$3.2M).
- Completion of U Ancillary facilities in less time than planned, resulting in less level of effort costs, efficiencies in completing demolition of post contract period structures; offset by cost overruns demolishing 233-S resulting from a first-of-a-kind demolition being more challenging than planned (+\$0.8M).
- Due to prior year efficiencies in staff resulting from not replacing budgeted staff and loaned labor to higher priority projects within D&D. Also due to lower than planned corrective maintenance in prior years for 209-E and B Plant (+\$2.5M).
- Due to prior and current year variance distributions (passbacks) (+\$4.1M).



## Schedule/Cost Performance (\$M), continued

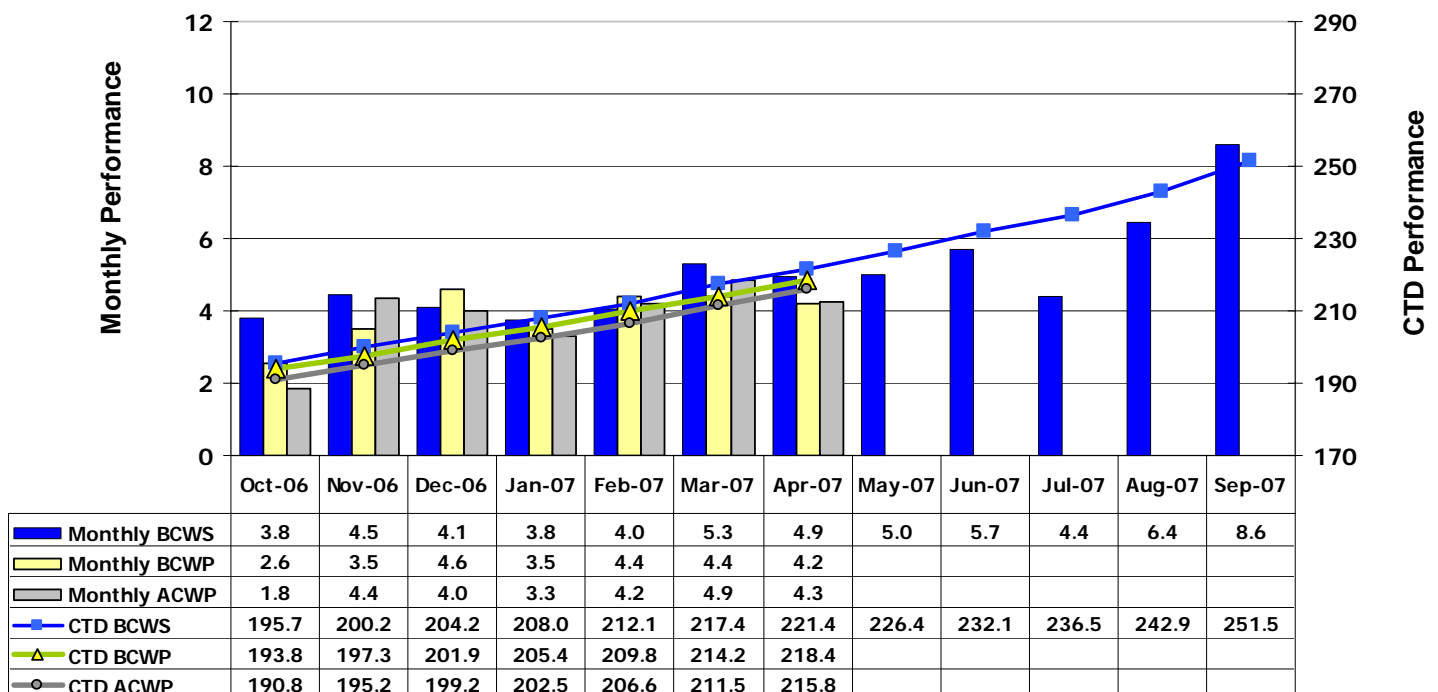
### CTD Cost Performance, continued:

The unfavorable CV for Waste Sites (-\$1.1M) continues to be due to the following:

- Unbudgeted resources for BC Cribbs and Trenches (-\$0.4M) directed toward preparation of the focused feasibility study and the proposed plan, along with preparation of the confirmatory/design DQO and SAP documents.
- Due to more document preparation support for CW-5 and TW-1/2 (-\$0.6M) required as a result of lessons learned (feasibility study and proposed plan development).
- 200-PW-2/4 (-\$1.0M) - Remedial Investigation (RI) sample costs higher due to highly contaminated samples; equipment replacement costs for unplanned contaminated equipment during the 216-A-10 field work; unplanned work and rework tied to the remedial investigation report (data compilation, preparation of the S-7 RI report, and a large number of comments on and difficulty with comment resolution).
- 200-PW-1/2/6 (-\$2.0M) - FY-04 Z-9 vertical borehole construction requiring more labor, analytical support and greater waste costs due to higher than expected radiological contamination found below ground and the discovery of carbon tetrachloride in the drill cuttings.
- 200-LW-1 (-\$1.6M) - Prior year variances associated with analytical costs which were planned for off-site analysis with a standard 45-day turnaround time, but analytical support has been provided by on-site labs with an expedited, quick-turn analysis to allow the lab data to be incorporated into the 200-TW-1 Feasibility Study and completion of the S-20, T-28, and Z-7 boreholes has cost more than planned.
- Offset by favorable variances for:
  - SW-1/2 (+\$0.2M) for completion of the RI Report early.
  - 600 Area Waste Sites (+\$0.5M) for completing the subcontracted preliminary design for less than planned.
  - CP Integration and Planning due to FY 2006 variance distributions (+\$3.6M).

The favorable CV for Closure Services (+\$0.3M) is within established thresholds.

### Performance Analysis CTD and Monthly (\$M)



## Milestone Achievement

MSN	Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status / Comments
M-015-45A	Submit 200-PW-1 OU Remedial Investigation Report	HQ	10/31/06	9/28/06		Completed ahead of schedule
M-091-40L-012	Quarterly Burial Ground vent/substrate sampling results (1st Qtr 2007)	HQ	12/15/06	11/1/06		Completed ahead of schedule
M-091-40L-013	Quarterly Burial Ground vent/substrate sampling results (2nd Qtr 2007)	HQ	3/15/07	2/13/07		Completed ahead of schedule
M-015-46B	Chemical Laboratory Waste OUs Feasibility Study	HQ	3/31/07		12/31/11	Behind schedule. M-15 tentative agreement changes date to 2011.
RL40.3a CPDD-07-011	Project Execution Plan reflective of an integrated groundwater source approach	RL	3/31/07	3/28/07		Completed ahead of schedule
RL40.2a CPDD-07-009	Draft "A" Excavation Treatability Test plan (including SAP) for the 200 Area BC Cribs and Trenches	RL	5/31/07			On schedule
M-091-40L-014	Quarterly Burial Ground vent/substrate sampling results (3rd Qtr 2007)	HQ	6/15/07			On schedule
MR.RL40.12 CPDD-07-004	212-N nuclear facility hazard reduction and downgrade	RL	11/30/07			On schedule
MR.RL40.9c CPDD-07-001	Safety basis document defining appropriate controls to allow disposition of U Plant Cell 30 tank contents	RL	6/30/07			On schedule
MR.RL40.11 CPDD-07-002	Ten High Risk Industrial Facilities Demolished to Slab on Grade	RL	6/30/07	2/12/07		Completed ahead of schedule
MR.RL40.9a CPDD-07-003	U Plant Canyon Facility Waste Acceptance Study	RL	6/30/07			On schedule
MR.RL40.9b D&D-07-001	U Plant Accelerated Closure Engineering Studies	RL	6/30/07			On schedule
MR.RL40.10 CPDD-07-005	Three 200-CW-3, 200 North Cooling Water Group, waste sites remediated under the remove, treat, and dispose alternative	RL	7/31/07			On schedule
M-091-40L-015	Quarterly Burial Ground vent/substrate sampling results (4th Qtr 2007)	HQ	8/31/07			On schedule
M-015-45B CPDD-07-006	Submit Draft A Feasibility Study and Proposed Plan for the 200-PW-1/3/6 Operable Unit Group.	HQ	9/30/07			On schedule
RL40.3b CPDD-07-007	Central Plateau Cleanup and Configuration Control Specification document	RL	9/30/07			On schedule
MR.RL40P.8 CPDD-07-008	Complete construction of Project L-626, 100B-A Water System Enhancement	RL	12/31/07			On schedule